REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of the claims

Claim 1 is amended. Claim 8 was cancelled, without prejudice or disclaimer. Claims 9 – 14 were withdrawn. The subject matter of added to claim 1 is disclosed, for example, at page 19 lines 24 to 25 of the Original Specification. Thus, no new matter is added.

Summary of the interview

Applicant expresses appreciation to the Examiner (Mr. Ishwarbhai B. Patel) for the courtesy of the telephone interview held on March 4, 2010, with applicant's representative, Kumar Maheshwari (Reg. No. 60,443). In the interview, claim 1 was discussed. In addition, the following references were discussed: Otto (U.S. Patent No. 6,188,921), Christopherson (U.S. Patent No. 6,339,047) and Higashiyama Kazuhisa (JP 408106823; hereinafter Higashiyama). More specifically, applicant's representatives explained that the features of claim 1 relating to as superconducting wire that has a cladding material with a breaking strain of 30% were not disclosed by a combination of the references of record. The Examiner agreed that the value of the breaking strain was not taught or disclosed by the references of record, but maintained the rejection on obviousness ground. Moreover, the Examiner suggested that adding the impurity elements could distinguish claim 1 from the references of record.

Claims rejections under 35 U.S.C. § 103

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otto (U.S. Patent No. 6,188,921) in view of Christopherson (U.S. Patent No. 6,339,047) in view of Higashiyama (JP 408106823). The rejection as to claims 1-7 is respectfully traversed.

Claim 1 recites a superconducting wire that includes among other features,

> a cladding metal comprising silver having an impurity concentration of 10 ppm to 500 ppm;
> wherein the impurity included in said silver is at least

one of Al, Fe, Cu, Ni, Si and Zn that imparts to the material a breaking strain of at least 30% in a stress-strain test.

Otto, Christopherson, and Higashiyama, alone or in combination fail to teach, suggest or render predictable the above recited features. In particular, with regard to Otto, Christopherson and Higashiyama the examiner acknowledges that these references fail to disclose a cladding metal comprising silver having an impurity concentration of 10 ppm to 500 ppm; wherein the impurity included in said silver is at least one of Al, Fe, Cu, Ni, Si and Zn that imparts to the material a breaking strain of at least 30% in a stress-strain test. (Examiner Interview dated March 4, 2010)

More specifically, Otto fails to teach, suggest or render predictable a silver cladding metal having an impurity concentration of 10 ppm to 500 ppm, wherein the impurity includes at least one of Al, Fe, Cu, Ni, Si and Zn and the impurity imparts to the material a breaking strain of at least 30%. Instead, Otto teaches using Ga as the impurity in much higher concentrations. (Otto, Column 14, lines 44 to 65 and Table 1)

Christopherson is cited in the Office Action as addressing the above distinctions of Otto and the claimed features. However, Christopherson does not address the distinction noted above with reference to independent claim 1. Specifically, Christopherson does not teach, suggest or render predictable a silver cladding metal having an impurity concentration of 10 ppm to 500 ppm where the impurity included in said silver is at least one of Al, Fe, Cu, Ni, Si and Zn that imparts to the material a breaking strain of at least 30% in a stress-strain test.

Similarly, Christopherson fails to teach a silver cladding metal having an impurity concentration of 10 ppm to 500 ppm where the impurity included in said silver is at least one of Al, Fe, Cu, Ni, Si and Zn that imparts to the material a breaking strain of at least 30% in a stress-strain test. Instead, Christopherson teaches high-purity silver usually contains some amount of impurity (Col. 4, ll. 14-16), Christopherson fails to disclose the claimed numerical range of the impurity concentration or the impurities and the effect, thereof.

As recited in the original specification the undesirable processing cracks in the superconducting wire can be reduced by controlling the purity level. (Page 19, line 25 to page 20, line 5) Specifically impurity concentrations below and above the claimed range created greater processing cracks. (Page 18, Table 1, Examples 6 through 10) In particular example 6 through 10 use different levels of impurity concentrations and cracks occurred at an impurity concentration of 5 ppm and 1000 ppm. (Original Specification, page 19, line 25 to page 20 line 3) These advantages relating to the purity of silver were not recognized by Christopherson nor did Christopherson's impurities impart the cladding material with a breaking strain of at least 30%.

Higashiyama fails to cure the above noted distinction of Otto or Christopherson. Instead, Higashiyama discloses a silver pipe having a 99.998% purity. Higashiyama fails to teach or suggest, a silver cladding metal having an impurity concentration of 10 ppm to 500 ppm where the impurity included in said silver is at least one of Al, Fe, Cu, Ni, Si and Zn that imparts to the material a breaking strain of at least 30% in a stress-strain test.

Accordingly, claim 1 is believed to be allowable. Because claims 2-7 depend from claim 1 they are believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

Concluding remarks

After amending the claims as set forth above, claims 1 – 7 are pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected

or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date: April 5, 2010

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